

Weekly Report

Period: 05/11/2014 – 05/18/2014

Projects

Research

The basic interactions including box selection, lasso selection, panning, and linked interaction is done (see Figure 1). We can explore the selected fibers in the 3D fiber space. Color is employed to represent different fiber models.

Studying the selected fibers of interest is an important analytic task. Four commonly used quantitative metrics [10] including the number of fibers, the average length, the average fractional anisotropy, and the total FA weighted fiber length can be quickly queried from our fiber corpus. To aid comparison, we employ a radial plot where each quantitative corresponds to one of the equiangular axes. Color is used to label different fiber models. Due to depth occlusion, simply showing all selected fibers in the 3D space makes it difficult to explore the differences. Curve bundling and simplification might be a solution.

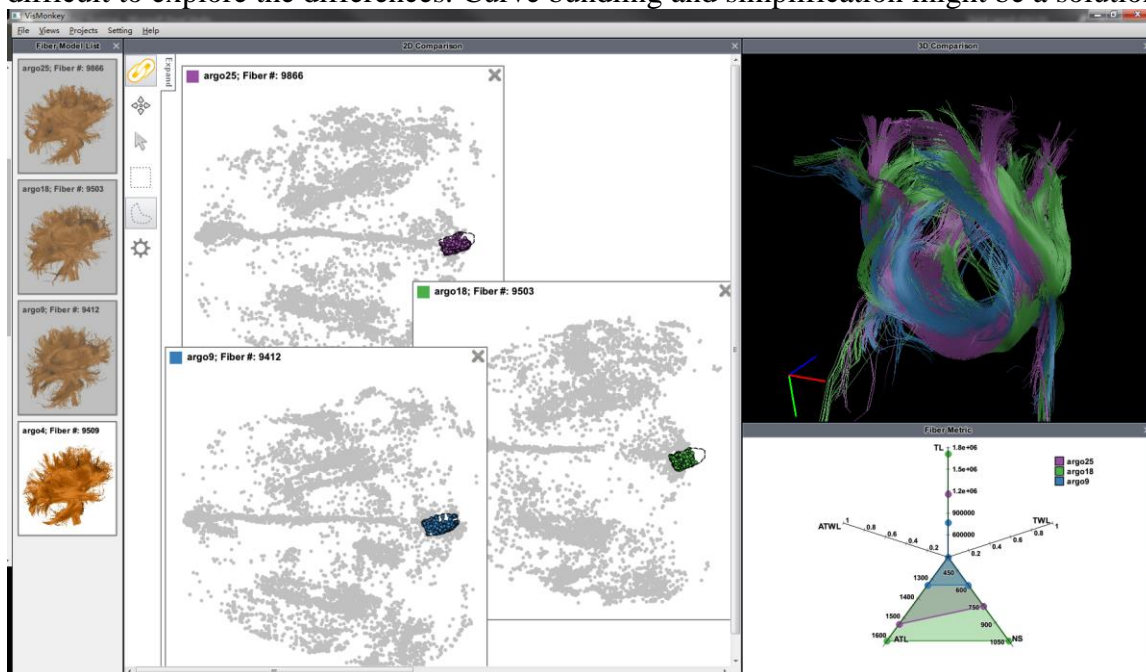


Figure 1 The main interface to explore and study differences of DTI fiber models

In addition, this week I was working on revision of our ensemble uncertainty paper.

Work to be done in next week

- Difference modeling in the 2D fiber projection space
- Curve bundling and simplification to overcome depth occlusion for comparison in the 3D fiber space

Reference: